

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A method for generating a plasma as a source of radiation by irradiating a pulsed laser on material, wherein said material is a particle-cluster which consists of many particles coupled with each other by a molecular force, an electrical force, or a binder made of a material which vaporizes at temperature lower than the melting point of said particles.

Claim 2 (Original): The method according to claim 1, comprising a method of cracking the particle-cluster to disperse aggregating particles prior to plasma generation with a help of a thermal, electrical, or mechanical shock with heating by the irradiation of a laser, charged particle beam, or other means.

Claim 3 (Currently Amended): The method according to claim 1 ~~or 2~~, wherein particles forming a particle-cluster are mixed in a liquid at room temperature or in a fluid which liquefies by cooling, thus prepared suspension is ejected to form a droplet, and a particle-cluster is formed by vaporization of a solvent which serves as a binder of particles.

Claim 4 (Currently Amended): The method according to ~~claims 1 through 3~~ claim 1, wherein liquid nitrogen, water, or organic solvent is employed as a solvent of the suspension liquid.

Claim 5 (Currently Amended): The method according to claim 3 [[or 4]], wherein particles in the suspension liquid in a reservoir are uniformly distributed in order to reduce

fluctuation of number of particles in a particle-cluster by controlling the potential of Hydrogen in the suspension liquid and/or by stirring the suspension or by other means.

Claim 6 (Currently Amended): The method according to ~~claims 3 through 5~~ claim 3, wherein a nozzle ejecting a suspension liquid is vibrated regularly for droplet generation.

Claim 7 (Original): The method according to claim 6, wherein a frequency of vibration is between 100 Hz and 1 MHz.

Claim 8 (Currently Amended): The method according to claim 6 ~~or 7~~, wherein amplitude of vibration is larger than 1  $\mu\text{m}$ .

Claim 9 (Currently Amended): The method according to ~~claims 3 through 9~~ claim 3, wherein vaporization or sublimation of a solvent of a droplet is performed in a separate space before delivering a droplet of a suspension to a plasma generation space.

Claim 10 (Original): The method according to claim 9, wherein vaporization or sublimation of a solvent of droplets is enhanced by heating droplets by laser irradiation or other means.

Claim 11 (Currently Amended): The method according to ~~claims 1 through 10~~ claim 1, comprising a method of charging a particle-cluster and a method of electrically controlling the trajectory of a particle-cluster.

Claim 12 (Currently Amended): The method according to ~~claims 1 through 11~~ claim 1, wherein particles constituting a particle-cluster is smaller than 1  $\mu\text{m}$  in diameter.

Claim 13 (Currently Amended): The method according to ~~claims 1 through 12~~ claim 1, wherein particles constituting a particle-cluster contain tin, tin oxide, or other tin compounds.

Claim 14 (Currently Amended): The method according to ~~claims 1 through 13~~ claim 1, wherein total mass of particles constituting a particle-cluster is larger than that of a single particle with solid-state density having a diameter of 5  $\mu\text{m}$ .

Claim 15 (Currently Amended): The method according to ~~claims 1 through 14~~ claim 1, wherein total mass of particles constituting a particle-cluster is smaller than that of a single particle with solid-state density having a diameter of 200  $\mu\text{m}$ .

Claim 16 (Currently Amended): The method according to ~~claim 1 through 15~~ claim 1, wherein particles constituting a particle-cluster are generated by the laser ablation of a liquid target or a solid target which includes chemical element comprising said particles.

Claim 17 (Original): A method for generating a plasma as a source of radiation by irradiating a pulsed laser on material, wherein generation of fine particles by irradiating a short pulse on a solid target or a liquid target is performed in the environment where a gas flows, and the generated particles are conveyed by the gas flow into a plasma generation space.

Claim 18 (Original): An apparatus for generating a plasma as a source of radiation by irradiating a pulsed laser on material, wherein

    said material is a particle-cluster which consists of many particles coupled with each other by a molecular force, an electrical force, or a binder made of a material which vaporizes at temperature lower than the melting point of said particles.

Claim 19 (Original): The apparatus according to claim 18, comprising a method of cracking a particle-cluster to disperse aggregating particles prior to plasma generation with a help of a thermal, electrical, or mechanical shock with heating by the irradiation of a laser, charged particle beam, or other means.

Claim 20 (Currently Amended): The apparatus according to claim 18 ~~or 19~~, wherein particles forming a particle-cluster are mixed in a material which is a fluid at room temperature or in a fluid which liquefies, thus prepared suspension is ejected to form a droplet, and a particle-cluster is formed by vaporization of a solvent which serves as a binder of particles.

Claim 21 (Currently Amended): The apparatus according to ~~claims 18 through 20~~ claim 18, wherein liquid nitrogen, water, or organic solvent is employed as a solvent of the suspension liquid.

Claim 22 (Currently Amended): The apparatus according to claim 20 ~~or 21~~, wherein particles in the suspension liquid in a reservoir are uniformly distributed in order to reduce fluctuation of number of particles in a particle-cluster by controlling the potential of Hydrogen of the suspension and/or by stirring the suspension.

Claim 23 (Currently Amended): The apparatus according to ~~claims 20 through 22~~  
claim 20, wherein a nozzle ejecting a suspension liquid is vibrated regularly for stable plasma generation.

Claim 24 (Original): The apparatus according to claim 23, wherein a frequency of vibration is between 100 Hz and 1 MHz.

Claim 25 (Currently Amended): The apparatus according to claim 23 [[or 24]], wherein amplitude of vibration is larger than 1  $\mu\text{m}$ .

Claim 26 (Currently Amended): The apparatus according to ~~claim 20 through 25~~  
claim 20, wherein vaporization or sublimation of a solvent of a droplet is performed in a separate space before delivery to a plasma generation space.

Claim 27 (Original): The apparatus according to claim 26, wherein vaporization or sublimation of solvent of droplets is enhanced by heating droplets by laser irradiation or other means.

Claim 28 (Currently Amended): The apparatus according to ~~claims 18 through 27~~  
claim 18, comprising a method of charging a particle-cluster and a method of electrically controlling the trajectory of a particle-cluster.

Claim 29 (Currently Amended): The apparatus according to ~~claims 18 through 28~~  
claim 18, wherein particles constituting a particle-cluster is smaller than 1  $\mu\text{m}$  in diameter.

Claim 30 (Currently Amended): The apparatus according to ~~claims 18 through 29~~  
claim 18, wherein particles constituting a particle-cluster contain tin, tin oxide, or other tin compounds.

Claim 31 (Currently Amended): The apparatus according to ~~claims 18 through 30~~  
claim 18, wherein total mass of particles constituting a particle-cluster is larger than that of a single particle with solid-state density having a diameter of 5  $\mu\text{m}$ .

Claim 32 (Currently Amended): The apparatus according to ~~claims 18 through 31~~  
claim 18, wherein total mass of particles constituting a particle-cluster is smaller than that of a single particle with solid-state density having a diameter of 200  $\mu\text{m}$ .

Claim 33 (Currently Amended): The apparatus according to ~~claims 18 through 32~~  
claim 18, wherein particles constituting a particle-cluster are generated by the laser ablation of a liquid target or a solid target.

Claim 34 (Original): An apparatus for generating a plasma as a source of radiation by irradiating a pulsed laser on material, wherein  
generation of small particles by irradiating a short pulse on a solid target or a liquid target is performed in the environment where a gas flows and the generated particles are conveyed by the gas flow into a plasma generation space.